

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: AIBA, et al.

Serial No. 09/690,377

Filed: October 17, 2000

Art Unit: 3721

Examiner: S. Tawfik

Attorney Docket No.: JG-KM-4818D/500576.20020

ANNULAR SUSTAINED
RELEASE PHEROMONE-
DISPENSER AND ITS
INSTALLATION TOOL

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AND INTERFERENCES

REPLY BRIEF PURSUANT TO 37 CFR 41.41

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Dear Sir:

This Brief is in reply to the Examiner's Answer mailed April 1, 2005.^{TECHNOLOGY CENTER R3.}

The Examiner asserts that Coplan et al. discloses a method for preparing an annular sustained release pheromone-dispenser whose end portions are connected to each other by the steps of arranging a plurality of continuous plastic tubes (referring to Figs. 3a and 3b) wherein the tubes have a diffusivity and permeability to a liquid synthetic (Abstract lines 1-3) and which are filled with a liquid synthetic sex pheromone (Fig. 1); fusing them at a predetermined pitch by heating under pressure and then cutting them at each fuse portion to produce a dispenser composed of two side by side tubes having closely sealed both end portions. This is an inaccurate description of the invention disclosed by Coplan.

CERTIFICATE OF MAILING

EXPRESS MAIL

deposited with the United States Postal Service on May 31, 2005, with sufficient postage as Express Mail, No. EV 398 732 283 US, in an envelope addressed to MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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The Examiner completely ignores the fact that Coplan specifically teaches away from providing tubes which are sealed at both ends. In fact, it is clear as set forth at column 8, lines 53-58 of Coplan that the capillary tubular filament 2 of the invention which has a bore or lumen is closed at one end by means such as heat-sealing or a plug such as epoxy cement or other suitable material. Indeed, as taught by Coplan it is imperative that only one end of the tube be sealed because it is intended that the pheromone which is deposited in the core of the hollow filament or tube is released by evaporation from one end of the tube because the other end is sealed. Consequently, one end of the tube of the Coplan reference must be opened. Note particularly at column 9, lines 25-33 where it is pointed out that the insect attractant 8 does not escape from the tubes until the tubes are severed at selected spots between sealed regions.

At column 3, lines 13-17, the reference discloses that the contained liquid is continuously evaporated from the liquid-air interface exposed at the bottom of the capillary to which it continuously feeds by the action of gravity. It is further pointed out at column 4, lines 21-30, that it is the basic purpose of the invention to provide an improved means for dissemination of vapors for a variety of purposes including pheromones in which the timing of the dissemination of the vapor can be controlled and its duration extended by evaporation from an eluded liquid-gas interface within the microconduits to a stagnant boundary layer of evaportent at an interface with the external atmosphere. Clearly, the entire and only means disclosed in this reference for dissipating the contained liquid into the atmosphere is by evaporation through an atmospheric or air interface with the liquid. The reference clearly mandates away from closing both ends of the tube since, without the open ends one could not possibly effect the dissemination of the liquid inside the tube of Coplan.

Moreover, there is absolutely no disclosure in Coplan of the use of continuous plastic tubes which have diffusivity and permeability to a liquid synthetic sex-pheromone as required by the present claims. Indeed, there is no need for using tubes having such diffusivity and permeability properties in Coplan because the liquid is introduced into the atmosphere by the atmosphere-liquid interface at the open end of the tube. Indeed, there would be no reason to use a tube having permeability or diffusivity to the liquid contained since Coplan specifically teaches controlling the introduction into the atmosphere by virtue of the atmospheric-liquid interface. If the tube material of Coplan were permeable to the liquid, it would be counterproductive to the very mechanism required by Coplan for introducing the liquid to the atmosphere.

The Examiner has further asserted that the present claims do not clearly recite that both ends of the plastic tubes are sealed. This is also incorrect. The claims as they stand specifically require that the side by side tubes have "closely sealed both end portions." This is clear on its face that the tubes are completely sealed. Considering further the fact that the tube material must have the diffusivity and permeability properties to the liquid synthetic sex pheromones, it is clear that this is the means by which pheromone is dissipated into the atmosphere, i.e., by permeating through the material of the tubes. No such mechanism is disclosed or required by Coplan.

While the Examiner admits that Coplan does not disclose that cutting the tubes at such fused portion, he asserts it would be obvious for one skilled in the art to modify Copland's method by cutting the tubes at the middle of each such fused portion because applicant has not disclosed that such cutting solves any stated problem or for any particular purpose. Firstly, this argument is irrelevant with respect to solving stated problems or for any particular purpose. What is important is the specific teaching of Coplan which cannot be construed as possibly cutting tubes at the middle of each fused portions since this would result in a tube which does not have an open end for evaporation of the contained liquid. This is the absolute antithesis of the invention in Coplan. Consequently, one skilled in this art would not only find no reason to sever the tubes at the middle of the sealed portions, Coplan teaches that the tubes must be severed in such a way as to have an open end.

Accordingly, the Coplan reference not only does not provide sufficient information to render the present claims obvious, it teaches away from the invention as claimed.

The Sakurada reference relied on by the Examiner, does not disclose sealed tubes having both ends sealed. Indeed, as disclosed at column 6, line 60 through column 7, line 5, the tubes are centrally cut into two pieces so that each has one end as an opening. This reference also teaches either the use of a tube with an open end or a sustained release preparation wherein the liquid pheromone is mixed into the resin preparation and simply diffuses through it, i.e., it is not in the form of a tube.

Accordingly, the Examiner's reliance on the Coplan reference either alone or taken with Sakurada is improper and the Examiner's rejection of these claims should be reversed.

Respectfully submitted,

Dated: May 31, 2005

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